



Difficult diagnosis of fetal cardiac anomalies in the first trimester - case report

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Introduction

Congenital cardiac anomalies are common structural anomalies and most of them are minor. Prenatal diagnosis can improve neonatal mortality and morbidity. Although in many countries, screening for fetal cardiac anomalies is most frequently performed in the second trimester, technological improvements have allowed more accurate diagnosis as early as the first trimester in experienced centers.

Case report

We present a case of a 31-year-old patient with no medical history and 13 weeks of pregnancy who came to our clinic for first trimester screening ultrasound scan. Ultrasound evaluation revealed the presence of a live intrauterine fetus, situs solitus and **complex cardiac anomalies** (Figure 1).

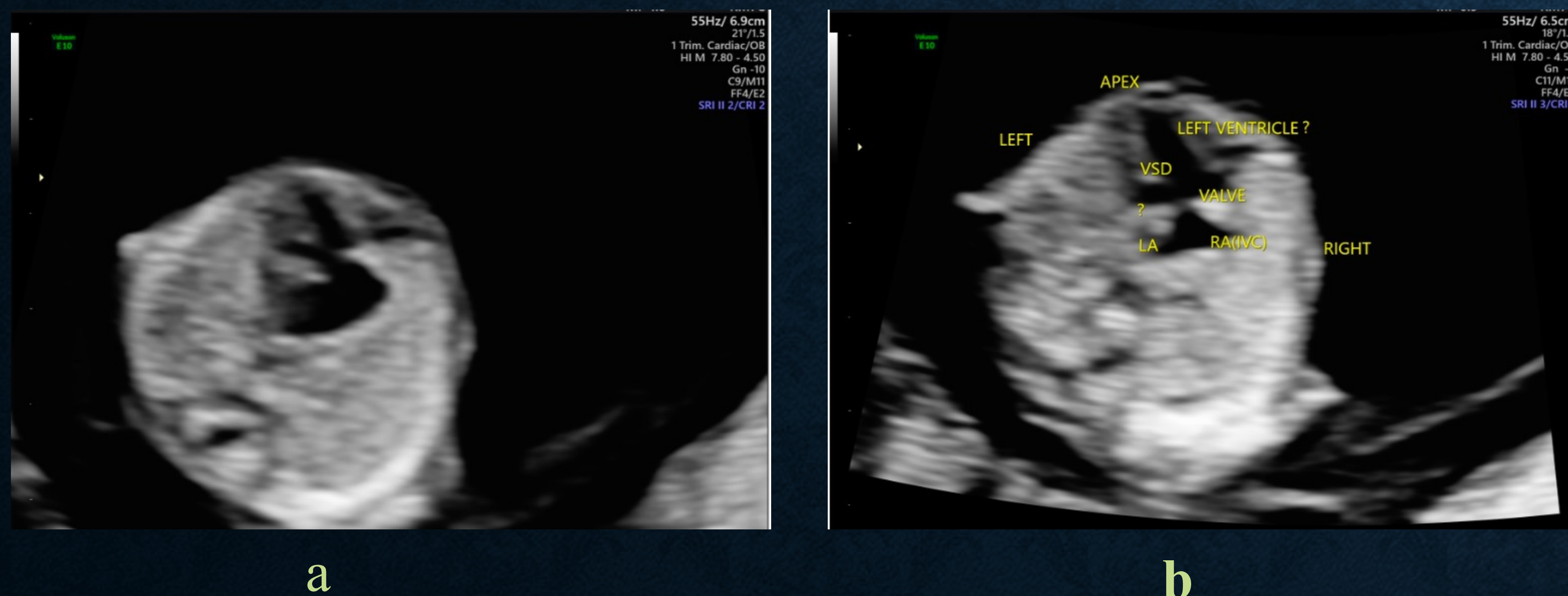


Figure 1. Complex cardiac anomalies

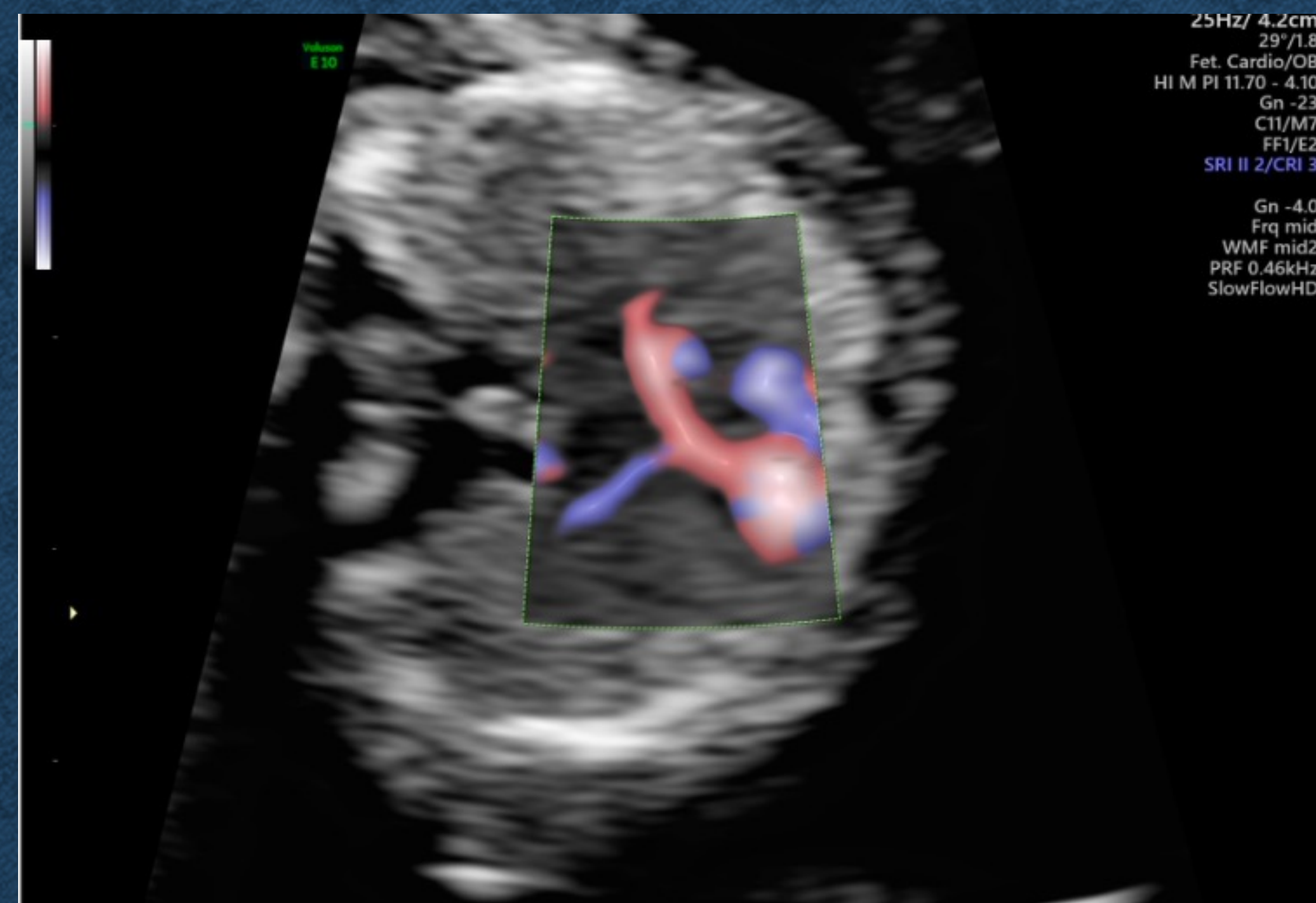


Figure 2. Emergent vessels

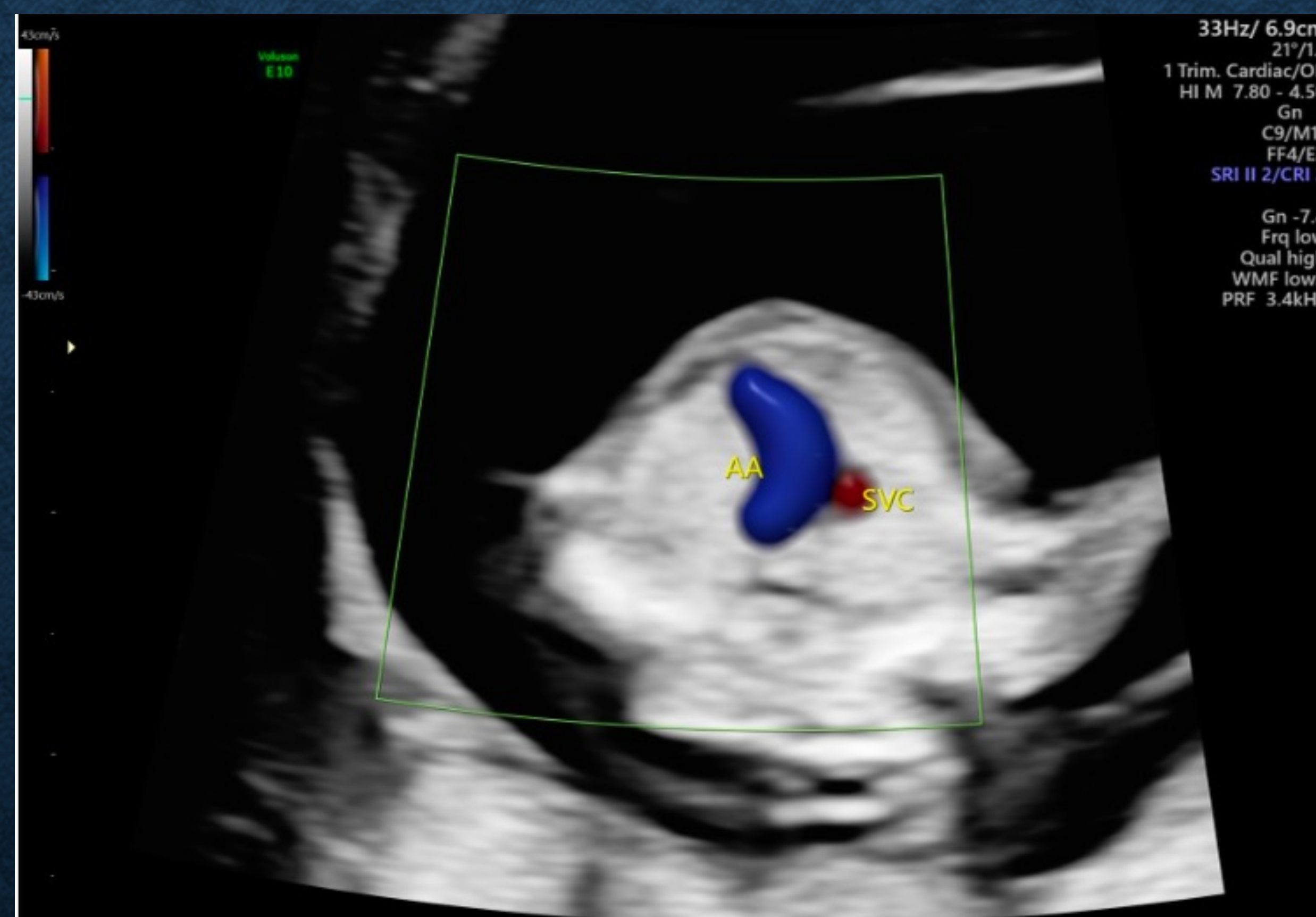


Figure 3. Aorta

A single functional **atrioventricular valve** is identified, **a single inflow** from the right atrium into a ventricle that forms the apex of the heart (probably it was the left ventricle). The other atrioventricular valve was atretic, hyperechogenic, without mobility. **Large septal defect** in the inlet through which the contralateral ventricle is also filled.

From left ventricle, the two vessels seem to emerge, probably into a **common arterial trunk type 1**. The aorta was positioned to the left of the trachea. Right superior vena cava was present.

Fetal cardiac specialist evaluation revealed a **double outlet right ventricle** with **malpositioned great vessels**; **mitral valve atresia**; **pulmonary stenosis**. No other fetal anatomical anomalies were identified.

Amniocentesis was performed at 16 weeks of gestation and the result was negative for the genetic anomalies tested. The patient was informed about the diagnosis, prognosis and associated risks in this case and the couple decided the termination of the pregnancy at 16 weeks of gestation. The patient's evolution was favorable and without complications. The anatomopathological evaluation confirmed the presence of a complex fetal cardiac anomaly.

Conclusion

The diagnosis of complex cardiac anomalies in the first trimester of pregnancy is challenging and often requires evaluation by specialized teams. Early diagnosis of these severe anomalies can improve the psychological impact on the patient and health care providers and reduce maternal morbidity.